

Management of hydatid angiocholitis

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ABSTRACT:

The hydatid cyst of the liver is a parasitic disease due to the development of *Echinococcus granulosus*. Surgery combined with medical treatment with albendazole is effective in the eradication of hydatid disease of the liver and the prevention of local recurrences. Although surgery is the recommended treatment for liver hydatid disease, percutaneous treatment was introduced as an alternative to surgery. The evolutionary state of the cyst, its volume and its seat are the factors of compromise of the bile ducts intra and extra liver. Hydatid angiocholitis is considered as a surgical emergency. In this study, we report our experience of management of ruptured liver hydatid cyst in the biliary tract as a function of the anatomical characteristics of the broken liver hydatid cyst and the complexity of the surgical treatment and to evaluate the results.

Keywords: Cystic echinococcosis, bile duct rupture, hydatid cyst, surgical emergency.

INTRODUCTION

Hydatid disease is a major global health problem. The disease is endemic in areas where close and continuous contact exists between domestic dogs, the main final hosts and sheep, which are the intermediate hosts. Infestation usually leads to cyst formation in the liver. Cystic echinococcosis accounts for 95% of the estimated 2 million cases of human echinococcal infections worldwide and is a major public health problem in many parts of the world [1]. It is listed by the World Health Organization as a neglected zoonotic disease since it primarily affects poor and marginalized populations in low-resource level [2]. The symptoms are local pressure, leaks, infections or rupture in the biliary tree. Hydatid cysts range from formal hepatic resection to cystectomy with omentoplasty [3]. Hydatid disease, caused by the larva of *Echinococcus granulosus*, is a cosmopolitan disease that prevails in the endemic state in some parts of the world. This is a public health problem in North Africa. The epidemiological situation in Algeria is complex and not fully understood and complete epidemiological data are lacking. Lesions of the liver, heart and lung were identified. In livestock, the frequency of hydatid cysts in the lungs and liver ranged from 1.8% in Setif [4]. The slaughtering of farm animals represents an ideal opportunity for dogs to access offal. Overall, the domestic cycle between livestock and dogs is unlikely to be broken as there are still too many slaughterhouses that do not conform to their premises and some of the malpractice is part of local customs [5]. Acute cholangitis is the most common syndrome, due to the presence of hydatid cyst rupture in the biliary

tract. Although surgical management is involved as the treatment of choice for uncomplicated liver hydatidosis, evidence is unclear about bile duct management. The objective of this study is to examine the literature regarding the presentation and management of complicated hepatic hydatid disease, with particular emphasis on surgical management of the most common complication, ie intra-biliary [6].

Diagnosis of liver hydatid disease is performed with ultrasonography and calculated tomography. Surgery combined with medical treatment with albendazole is effective in the eradication of hydatid disease of the liver and the prevention of local recurrences. Although surgery is the recommended treatment for liver hydatid disease, percutaneous treatment was introduced as an alternative to surgery [7].

INTRA-BILIARY RUPTURE FACTORS

Some clinical factors that may favor intra-biliary rupture of a cyst may help to establish better diagnosis and better management. The exact effect of these factors is not yet well established [8]. Some factors may be at the origin of intra-thoracic rupture such as:

- a) The intra-thoracic negative pressure tends to suck the hepatic hydatid cyst.
- b) The mechanical compression maintained by the cyst on the diaphragm.
- c) Sepsis in the hepatic cyst may also contribute to muscle necrosis near the cyst.

d) In the case of biliary fistula, caustic property of biliary, secretions can lead to chemical erosion of the diaphragm and bronchi [9].

This study supports some clinical factors that are associated with intra-biliary rupture of the hydatid cyst.

METHODS

It is a descriptive and analytical study of liver hydatid cyst ruptured in the bile ducts causing angiocholitis. This retrospective study is carried out over a period of 7 years and 4 months from 1 January 2010 to 30 April 2017 and covers all patients undergoing surgery at university hospital of Setif in Algeria for a hydatid cyst of liver.

Thirty seven patients operated for liver hydatid cyst ruptured in the biliary tract.

DISCUSSION

The analysis focused on sex, age, social environment, and distribution of organ cyst localization, surgical technique, complication and progression of operated patients.

The age factor is considered considering its effect in this kind of situation. This parasite almost spares no age. The frequency as a function of age evolves according to the bell-shaped GAUSS curve. For this, we can say that hydatidosis is a disease that affects the people of all ages but especially adults. This is due to the fact that hydatidosis is a long-term developmental early years of life and late diagnosis. This can be explained by a greater exposure of children to infestation by their almost daily contact with stray or company dogs, and by the length of time between the time of contamination and the appearance of clinical signs. In some cases, these signs do not attract the patient's attention than at an advanced stage, or even at the complication of the cyst. In our case, the average age of 27 years with extremes ranging from 19 to 47 years was observed. This is in line with the findings literature.

The predominance of the male sex is proven. This may be related to activities of men who are more in contact with animals than women and the practice of agricultural work.

According our data, hydatidosis is a disease of the rural environment. The cases of the urban environment would be composed of persons who have a profession bringing in contact with dogs and sheep (Shepherd, butcher), persons who have a poor quality of hygiene, also, the practice of uncontrolled clandestine slaughter, family celebrations and they do not care about the disinfection of their food [10]. In our study we observed that the hydatidosis in liver and lungs are by far the organs the most affected by parasitosis with a higher frequency for hepatic localization. However, localization may also be of interest, but much less frequently, others localizations such as spleen, kidney, heart, bone or nervous central system.

Ultrasound revealed complicated liver hydatid cyst in 41% of cases and computed tomography in 59% cases. Total pericystectomy was performed in 78% and total subcutaneous in 22% of cases. External biliary drainage was performed in all patients. The surgical follow-up was simple except for 5 cases of wound infection.

It has been found that at the higher age there is an increase in the size of the cyst and also the presence of Bilobar cysts that increase intra-biliary rupture rates. It has been found also that the superficial position and the larger cystic dimensions have increased peritoneal perforation rates.

CONCLUSION.

The hydatid cyst of the liver is a benign, but potentially life-threatening condition due to the complications. Opening liver hydatid cyst in the biliary tract is the most frequent complication and poses a problem of definition and complexity of management. Surgical treatment remained the basic means, all patients were treated surgically. The hydatid cyst imposes a disease prevention which must be rigorously applied at all levels of the epidemiological chain to cut the cycle of the parasite, which requires close cooperation between the medical, veterinary and agricultural sectors. Treatment surgery is the treatment of choice. The resection of the protruding dome remains an acceptable method in an endemic country. For percutaneous drainage and medical treatment of clinical studies randomized trials evaluating different therapeutic methods are still needed to

standardize the therapeutic attitude. Finally, the actual treatment remains in fact the prophylaxis.

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